

# Goals



- Determine the Local and global slide conditions
- Obtain design parameters
- Address risk factors

# Investigation Program Overview



- Aerial Surveys
- Geologic Mapping
- Drilling
- Instrument Installation and Monitoring (SI, VWP, TDR)
- Ground Surveys
- Data Analysis





# Highway 87 Slide - March 21, 2008



Geologic mapping by Clay Conway, 1995

Ql - Landslide (Pleistocene - Holocene) -- Chaotic masses of rock that have slid down and away from their bedrock source on the order of tens to hundreds of feet. Movement is along a basal listric fault and along numerous internal breaks of great complexity. Thickness to 120 feet.

Qto- Talus and colluvium (Pleistocene - Holocene) -- Older deposits formed by mass wasting processes on slopes that are no longer receiving debris but which are undergoing dissection. Thickness to 15 feet.

--- Approximate slide head scarp  
— Mapped geologic units (C. Conway, 1995)

0 0.1 0.2 0.3 0.4 0.5 Miles





# DRILLING

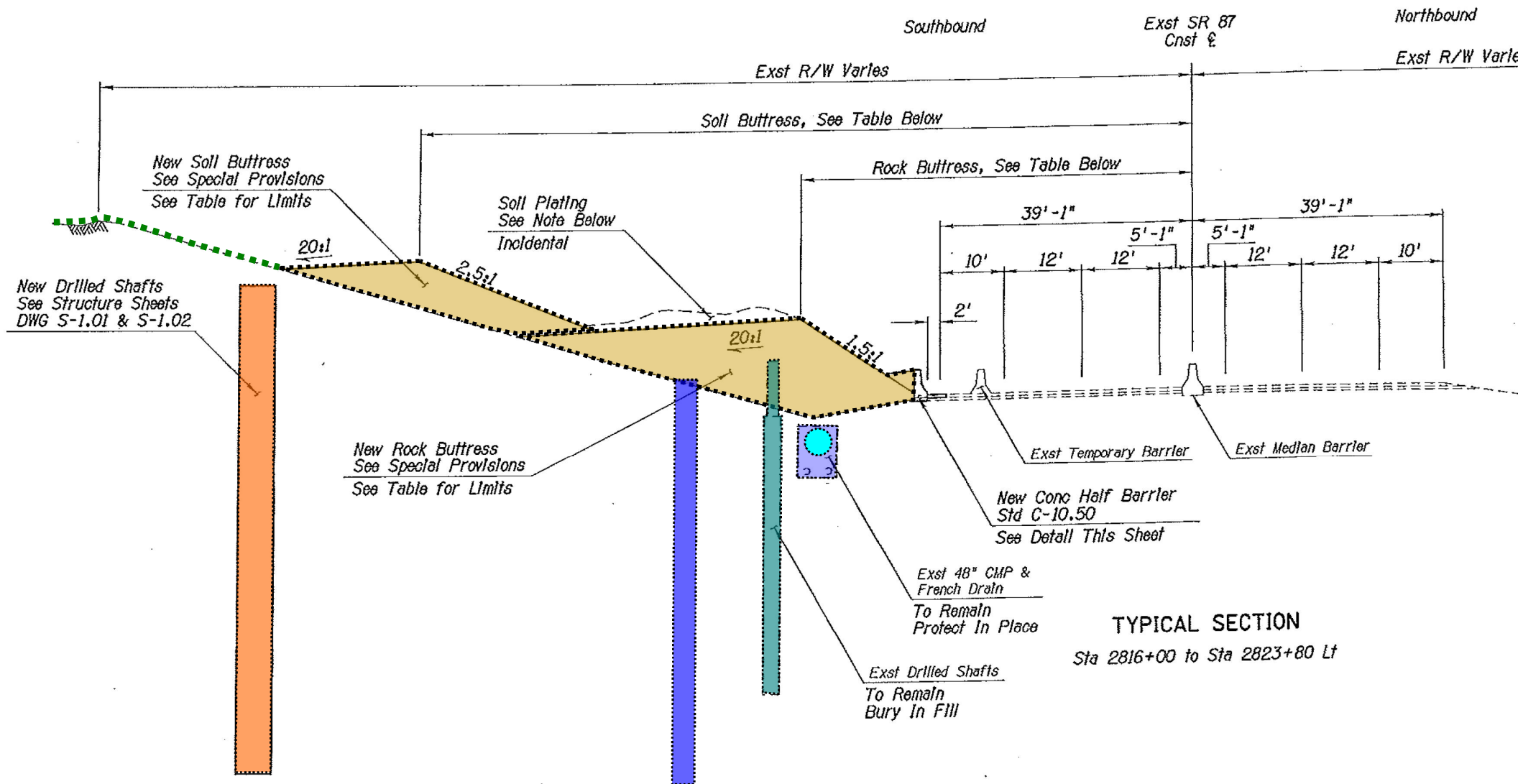
TYPE	LOCATIONS	FEET
SONIC CORE	17	1,203
HQ CORE	19	3,890
HSA	28	1,265
TOTAL	64	6,358

# INSTRUMENTATION

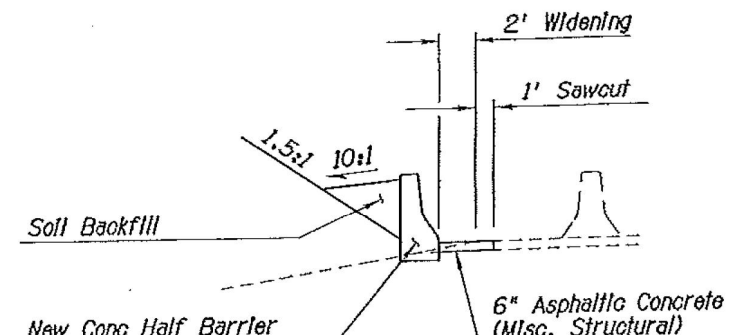
TYPE	LOCATIONS	NOTE
SI	21 (+4 OLD)	3,708
TDR	18	3,654
VWP	33 (13 LOCATIONS)	SHALLOW, MIDDLE, DEEP
WIRE EXTENSOMETERS	3	SOIL NAIL WALLS AND RECENT SLIDE AREAS
FIXED BOREHOLE WIRE EXTENSOMETERS	4	SHEARED SI INSTALLATIONS
TOTAL	79	

# DEFORMATION SURVEYS

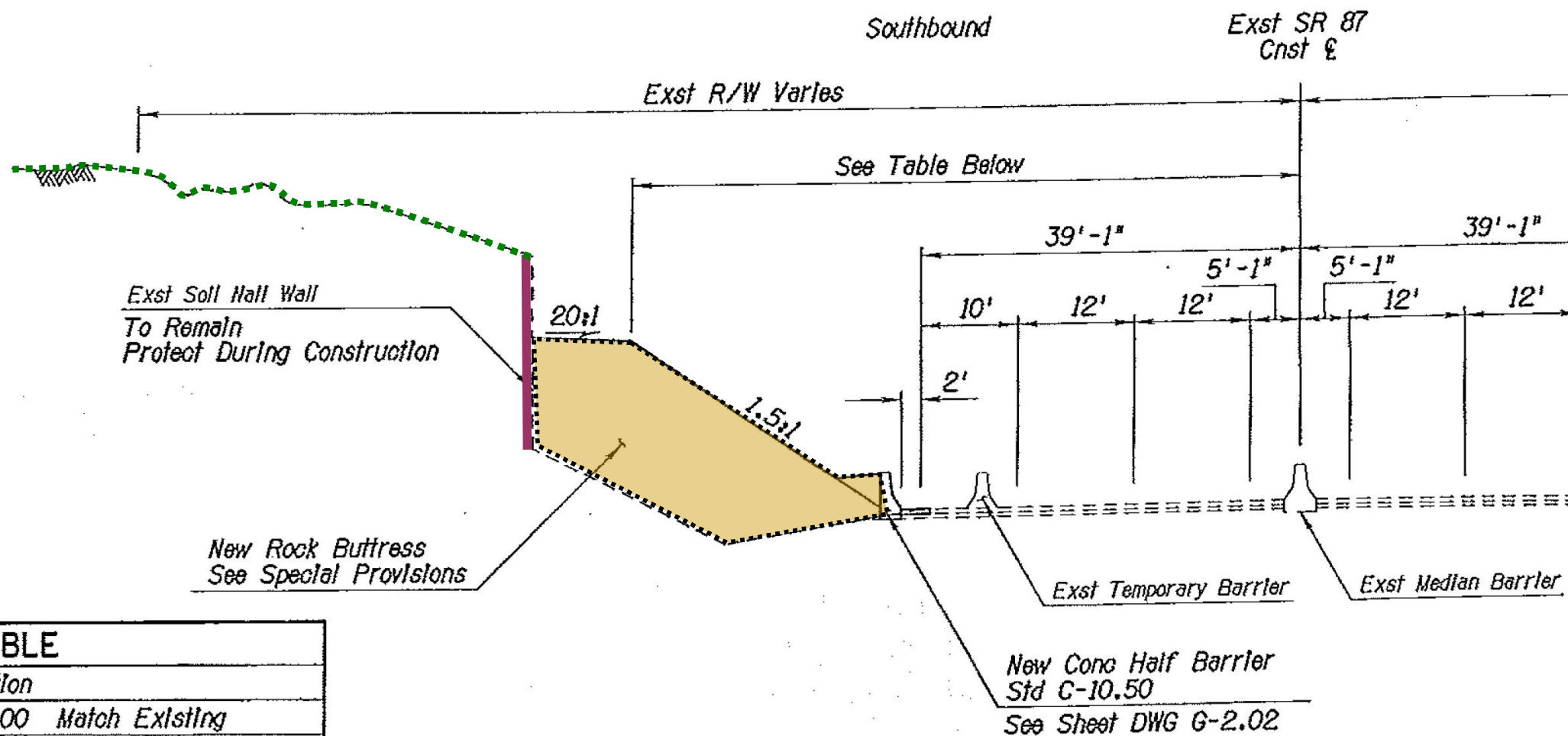
TYPE	LOCATIONS
REBAR MONUMENTS	14
SOIL NAIL WALL PRISMS	22
MSE WALL	3
APS TOWER FOOTINGS	8
MAG NAILS – ROADWAY	16
TOTAL	63



BUTTRESS CONTROL TABLE						
SOIL BUTTRESS				ROCK BUTTRESS		
Station	Side	Offset	Elevation	Side	Offset	Elevation
2816+00				Lt	77'	
2817+00				Lt	77'	4237.00



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# TABLE

Elevation

05.00 Match Existing

28.00

25.00

90.00 Match Existing

## TYPICAL SECTION

Sta 2802+60 to Sta 2805+00 Lt

Southbound

Exst SR 87  
Cnst E